



Army Capt. Charles Day checks radioactivity at Cactus Crater, created when a nuclear device was detonated on Runit Island in Enewetak Atoll (inset) in 1958.

New cloud hangs over Enewetak: health fear for returning natives

First of three articles

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ENEWETAK ATOLL. — The 20th century slammed across this neck-pace of islets in a fury. Now spent of war and nuclear explosions, the atoll is ready to be returned to the gentle people who formerly lived here.

The people of Enewetak can overcome the unexploded ordnance and other debris of World War II. They are less certain about living with radioactivity — some of it to remain for 250,000 years — released from 43 nuclear tests in the northern part of the atoll from 1949 through 1958.

Recent cases of cancer have occurred among other people of the Micronesian mid-Pacific who were irradiated from the fallout of a hydrogen bomb test in 1954. The unexpected malignancies have called

ed into question the scientific assumptions of human tolerance to radiation.

Unlike populations of other mid-Pacific atolls who were dosed with downward fallout, especially at Rongelap and Utrik, the Enewetak people are believed to have escaped radioactive contamination. The United States had removed them forcibly before the tests, to a distant group of islands known as Ujelang atoll.

Although most want to return, some of the people are wondering whether the technology that reduced much of Enewetak to nuclear rubble also can locate and remove contaminated matter to a level that will keep them free from radiation-induced illnesses such as cancer and gene mutations.

While decontamination scientists of the Defense Nuclear Agency and the former Atomic Energy Commis-

sion, now the Energy Research and Development Administration (ERDA), affirm they can do the job, events of recent years have instilled a sense of caution in the people of Enewetak.

Ten years ago, the United States undertook a similar cleanup at Bikini atoll and allowed some residents

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to return. A still-pending suit was filed in 1975 with the U.S. District Court in Hawaii, claiming that the radiological scrubbing of Bikini was incomplete. ERDA monitoring of some 100 Bikini people who moved back to their atoll in 1970 has revealed an uptake of radionuclides — spontaneously emitted radiant energy — in residents that is deemed higher than acceptable.

"Some of them are eating unap-

proved foods with a high cesium uptake," said ERDA physicist Roger Ray last week on Enewetak.

Cesium, a radioactive fallout product of nuclear explosions, bears a chemical resemblance to phosphorus and is found in edible plants. The time lag for any given amount of cesium to decay by one-half, known as its half-life, is 30 years.

"We will be having talks in the next few weeks with Trust Territory officials on what to do without alarming the people of Bikini," Ray said.

Bikini, Enewetak, Rongelap and Utrik are all radiation-exposed atolls of the Marshall Islands administered by the United States under a United Nations trusteeship set up in 1947.

Besides the problems on Bikini, events have occurred on Rongelap and Utrik to shake confidence in the

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Unofficially in Enewetak

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U.S. decontamination program. A little-publicized study by the Brookhaven National Laboratory reported in 1974 that growth retardation and thyroid tumors have developed in some Rongelap residents.

"They received skin irradiation in the 'thousands of rads' from the downwind fallout of Operation Bravo, the U.S. hydrogen bomb explosion at Bikini of March 1, 1954," the study said.

"At the time of the (fallout) accident it was not considered likely that the thyroid had received a sufficient dose of radiiodine to result in abnormalities." In retrospect this proved to be quite wrong, since thyroid injury and its sequelae have been the most serious late result of the fallout exposure of the Marshallese people," said the report.

Of 68 persons irradiated on Rongelap, 29 developed thyroid abnormalities by 1973 and 24 underwent surgery for the removal of tissue. Cancer was found in three of the 24 patients.

The 20-year Brookhaven review, carried out for the Atomic Energy Commission, said: "Regarding cancer of the thyroid, on the basis of Marshall Islands statistics, about 0.033 cases would be expected in the Rongelap group over the 20-year period, whereas three cases occurred."

The 157 or 158 people of Utrik atoll were farther downwind and received perhaps a 10th as many rads, which are a unit of absorbed dosage. Of that atoll, the study said: "In the Utrik population about 0.06 cases would be expected and one occurred; in view of the low dose of radiation it is unlikely that this case is radiation induced."

It now develops, however, that more than one malignancy have occurred among the Utrik people. An ERDA health team has documented three confirmed cases of thyroid cancer, with still another unconfirmed. The Utrik people reportedly have lost confidence in the ERDA health visits, which are paid four times a year.

The incidence of thyroid cancer on Utrik may lead to a reexamination of previously assumed "safe" levels of ionizing radiation.

Dr. Knud D. Knudsen, an ERDA physician stationed on Kwajalein atoll, left by boat last week to conduct the quarterly exams on Utrik and Rongelap but will not visit Utrik, according to Theodore Murawski, another ERDA health official on Kwajalein.

"We're trying to get another physician out here to visit Utrik," he said. "Dr. Knudsen is not going to Utrik on this trip in part because the people there don't want him."

It is against this background that ERDA and the Defense Nuclear Agency are beginning their three-year cleanup of Enewetak with \$20 million appropriated by Congress.

Visitors to the atoll arrive at Enewetak island, the largest of some 60 islands that encircle the placid waters of a lagoon 17 miles across and 23 miles long in a northerly-southerly axis. The name "Enewetak" is preferred by the islanders over "Eniwetok," the more common usage in past news stories.

Although a pinprick on the map, the atoll becomes a world of its own as one searches the horizon, able to see only a few of the scores of islets.

In a corrugated tin building, the humidity held in check by trade winds and one struggling air conditioner, Army Col. Edgar Mixan led a briefing on the plan to return Enewetak to the people who, according to their legends, were "here from the beginning."

Twelve islands of the atoll are con-

sidered noncontaminated at present, all of them in the south. Enewetak island, anchoring the southern quadrant of the vast fringing reef, and Medren island, two dots northward, were once bustling places where as many as 10,000 scientists and support personnel lived while exploding nuclear devices at the atoll's northern section.

In the 1950s, Enewetak again became active as the receiving end for missiles launched from Vandenberg Air Force Base in California. Nose cones were aimed at the lagoon and recovered from its depths of 100 to 200 feet.

Troops of the 84th heavy combat engineering battalion from Schofield Barracks in Hawaii started arriving last week to clean up from the northern area an estimated 125,000 cubic yards of noncontaminated debris, 7,500 cubic yards of radioactive material and another 79,000 cubic yards of soil contaminated with plutonium.

For the next six months they will be renovating facilities on Enewetak and building a mini-city on Lojwa, one of the few islands in the north considered safe. A thousand troops and decontamination scientists will be sanitizing the atoll when the operation reaches its peak by the end of the year.

When through, they will dismantle most of the structures, then turn over to the Department of Interior an additional \$12 million job of creating an agricultural base and living facilities in a land-use plan worked out in agreement with the Enewetak people.

NEXT: The Enewetak people return home.